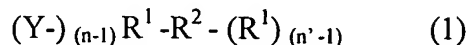


**Amendments to and Listing of the Claims:**

1. (Currently Amended) A method for producing a coupling compound of formula (1):



wherein  $R^1$ ,  $R^2$ ,  $n$  and  $n'$  are as defined below,

$Y$  is  $R^2$  or  $X$  as defined below,

which method comprises reacting

an organic halogen compound of formula (2):

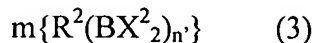


wherein  $X^1$  represents a bromine or iodine,

$R^1$  represents a substituted or unsubstituted, linear, branched or cyclic hydrocarbon group of which  $\alpha$  and  $\beta$  carbon atoms in relation to  $X^1$  are  $sp^3$  carbon atoms,

$n$  and  $n'$  each independently represent an integer of 1 or 2, and provided that  $n$  and  $n'$  do not simultaneously represent 2,

with an organic boron compound of formula (3):



wherein  $R^2$  represents a substituted or unsubstituted aryl group, a substituted or unsubstituted heteroaryl group, or a substituted or unsubstituted alkenyl group and the boron atom is bonded with a  $sp^2$  carbon atom thereof,

$X^2$  represents a hydroxyl or alkoxy group,

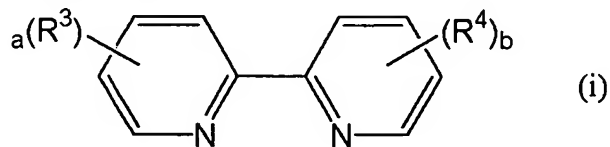
$n'$  is as defined above,

$m$  represents an integer of 1 or 2, and  $m$  is not more than  $n$ ,

in the presence of a catalyst comprising

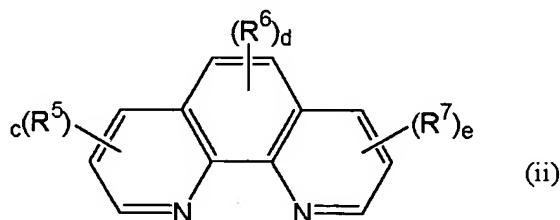
a) a nickel compound, and

b) b-1) a compound of formula (i):



wherein  $R^3$  and  $R^4$  each independently represent  
 an alkyl, aryl, alkenyl, alkynyl, alkoxyl, hydroxy, hydroxyalkyl, sulfo,  
 alkyloxycarbonyl, aryloxycarbonyl, carbamoyl, cyano, isocyano, cyanato, isocyanato or formyl  
 group, or a hydrocarbylsilyl group, and  
 optionally two adjacent groups among  $R^3$  and  $R^4$  groups with the carbon atoms to  
 which they are bonded form a ring,  
 a and b are the same or different and independently represent an integer of 0 to 4,  
 or

b-2) a compound of formula (ii):



wherein  $R^5$ ,  $R^6$  and  $R^7$  groups are the same or different and independently  
 represent

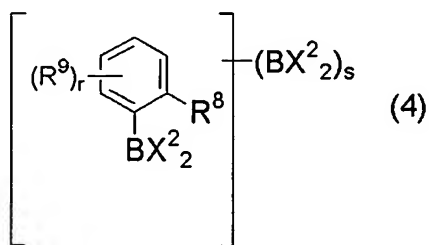
an alkyl, aryl, alkenyl, alkynyl, alkoxyl, hydroxy, sulfo, alkyloxycarbonyl,  
 aryloxycarbonyl, carbamoyl, cyano, isocyano, cyanato, isocyanato or formyl group, or a  
 hydrocarbylsilyl group, and

optionally two adjacent groups among  $R^5$ ,  $R^6$ , and  $R^7$  groups with the carbon  
 atoms to which they are bonded form a ring,

c, and e are the same or different and independently represent an integer of 0 to 3,  
 and

d represents an integer of 0 to 2; or  
 a mixture thereof.

2. (Original) A method according to claim 1, wherein the organic boron compound  
 of formula (3) is a boron compound of formula (4):



wherein  $R^8$  represents a hydrogen atom,

$r$  represents an integer of 0 to 4,

$s$  represents an integer of 0 or 1,

$R^9$  is the same or different and independently represents a substituted or unsubstituted aryl group,

a substituted or unsubstituted heteroaryl group, or

a substituted or unsubstituted linear, branched, or cyclic alkenyl group, or

$R^9$  groups bonded with adjacent carbon atoms of the benzene ring together with the benzene ring form an ortho, or ortho, peri condensed polycyclic aromatic ring,

$X^2$  represents a hydroxyl or alkoxy group, or

$X^2_2$  groups together form an alkylendioxy group, or

a boronic acid trimer thereof, and

$r+s \leq 4$  when the benzene ring does not form a condensed polycyclic aromatic ring.

3. (Currently Amended) A method according to claim 1 [~~0-2~~], wherein the nickel compound is a nickel salt, or a complex compound of zero or divalent nickel.

4. (Currently Amended) A method according to claim 1 [~~0-2~~], wherein  $R^3$  and  $R^4$  are alkyl and  $a$  and  $b$  are 1 or 2.

5. (Currently Amended) A method according to claim 1 [~~0-2~~], wherein  $a$  and  $b$  are 0.

6. (Currently Amended) A method according to claim 1 [~~0-2~~], wherein  $R^5$  to  $R^7$  are alkyl, and  $c$ ,  $d$  and  $e$  are 1 or 2.

7. (Original) A method according to claim 3, wherein  $c$ ,  $d$  and  $e$  are 0.

8. (Original) A method according to claim 1, wherein the compound of formula (i) is

dipyridyl, 4,4'-dimethyl-2,2'-dipyridyl, 4,4'-diphenyl-2,2'-dipyridyl, 5,5-dimethyl-2,2'-dipyridyl, 4,4'-di-*t*-butyl-2,2'-dipyridyl, 6-methyl-2,2'-dipyridyl, 2,2'-biquinoline, 6,6'-bi-2-picoline, 2,2'-bi-4-lepidine, 4,4'-dinonyl-2,2'-dipyridyl, 2,2'-dipyridyl-3,3'-diol, 2,2'-biquinoliny-4,4'-dicarboxylic acid dibutyl ester, or 4,4'-dimethoxy-2,2'-dipyridyl, and

the compound of formula (ii) is

2,9-dimethyl-4,7—diphenyl-1,10-phenanthroline, 2,9-dimethyl-1,10-phenanthroline,  
3,4,7,8-tetramethyl-1,10-phenanthroline, 4,7-dihydroxy-1,10-phenanthroline,  
4,7-diphenyl-1,10-phenanthroline, 4-methyl-1,10-phenanthroline,  
5-methy-1,10-phenanthroline, 5-phenyl-1,10-phenanthroline, 4,7-dimethyl-1,10-phenanthroline,  
5,6-dimethyl-1,10-phenanthroline, 1,10-phenanthroline-2,9-dimethanol, or  
2, 9-di-n-butyl-1,10-phenanthroline.